AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

- 1-23. (Cancelled).
- 24. (New) A thermoplastic polymer comprising an elastomer as a main chain, in which a diene moiety is 5 mol % or less, and a side chain having at least one member selected from the group consisting of the following formulae (1), (2) and (3), which bonds to the main chain at α -position or β -position,

wherein R represents a nitrogen-containing heterocycle,

wherein the proportion of side chain units is 0.1 to 50 mol % with respect to 100 mol % of the main chain monomer units and wherein the thermoplastic polymer reversibly forms a stable crosslinked structure at room temeprature and dissociates the crosslinked structure at a temperature of 120°C or higher.

- 25. (New) The thermoplastic polymer of claim 24, wherein the nitrogen-containing heterocycle is a five-membered ring or a six-membered ring.
- 26. (New) A rubber composition containing the thermoplastic polymer of claim 24.

27. (New) A thermoplastic polymer comprising an ethylen -propylene copolymer (EPM), an ethylene-butene copolymer (EBM) or an ethylene-propylene-diene copolymer (EPDM) as a main chain, and a side chain having at least one member selected from the group consisting of the following formulae (1), (2) and (3), which bonds to the main chain at α-position or β-position,

wherein R represents a nitrogen-containing heterocycle,

wherein the proportion for the side chain moiety is 0.1 to 50 mol % with respect to 100 mol % of the main chain moiety and wherein the thermoplastic polymer reversibly forms a stable crosslinked structure at room temperature and dissociates the crosslinked structure at a temperature of 120°C or higher.

- 28. (New) The thermoplastic polymer of claim 27, wherein the nitrogen-containing heterocycle is a five-membered ring or a six-membered ring.
- 29. (New) A rubber composition containing the thermoplastic polymer of claim 27.